R Ø12Ø34Z
FM NPIC WASH DC
TO AFSSO AFSC ANDREWS AFB
INFO AFSSO ASD/ASRD
AFSSO USAF
[redacted]
ZEM
S E C R E T CITE NPIC 4951
AFSC FOR [redacted]
USAF FOR
ASD FOR
SECRET SENIOR YEAR LIMDIS [redacted]

1968 NOV 1 20 55Z

OUT 66305

25X1

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REF (A) NPIC 3912 (S) DTG 312219Z MAY 68
(B) SAC (S) DISD 111951Z JUN 68
(C) AFSC (S) DTG 1315Ø5Z AUG 68

SUBJECT: ATTIUDE AND POSITION DATA REQUIREMENTS FOR SENIOR YEAR AND [redacted] PROJECTS

1. NPIC DESIRES THE FOLLOWING ATTITUDE AND POSITION DATA FROM THE SENIOR YEAR PROJECT EMPLOYING A MODIFIED KA-8Ø OPTICAL BAR CAMERA. SOME ADDITIONAL USEFUL DATA REQUIREMENTS EXIST IF AIRBORNE RECORDER AND GROUND PROCESSING CAPABILITY NOT FULLY UTILIZED. REQUIREMENTS FOR OTHER SYSTEMS USING THE KA-8Ø CAMERA MUST BE IDENTIFIED PER SYSTEM.

A. THE RECORDER DATA SHOULD BE MADE AVAILABLE FOR TRANSMISSION IN EXCESS-THREE (XS-3) CODE VIA THE UNIVAC 1ØØ4 DATA LINK. EACH BLOCK OF DATA CONTAINS THE INSTANTANEOUS CAMERA AND VEHICLE PARAMETERS FOR THE INSTANT OF ZERO SCAN PASSING. EACH DATA BLOCK TO CONTAIN TWELVE(12) QUANTITIES, TO BE FORMATTED ACROSS THE PAGE EQUALLY. THESE QUANTITIES, THEIR FORMATS, AND UNITS ARE AS FOLLOWS:

1. FRAME COUNT	DDDD
2. TIME (GMT:HRS:MIN:SEC)	DD DD DD.DD
3. NADIR LATITUDE (DEG:MIN:SEC)	DD DD DD.DDZ (N OR S)
4. NADIR LONGITUDE (DEG:MIN:SEC)	DDD DD DD.DDZ (E OR W)
5. ALTITUDE (HUNDREDS OF FEET)	DDDD.D
6. TRUE HEADING (DEG)	DDD.D
7. GROUND SPEED (KNOTS)	DDD
8. PITCH (DEG:PLUS NOSE UP)	SDD.D
9. ROLL (DEG:PLUS LEFT WING UP)	SDD.D
1Ø. YAW (DEG:PLUS NOSE LEFT)	SDD.D
11. CAMERA POINTING ANGLE (Ø VERT, 1 FORE, 2 AFT)	D
12. LINE IDENTIFIER (1, 2, OR 3) OPTICAL BAR EXPOSURE (1) TRACKER EXPOSURE (2) AIRCRAFT DATA ONLY (3)	D

WHERE D EQUALS NUMERIC, Z EQUALS ALPHABETIC, AND S EQUALS ALGEBRAIC SIGN: POSITIVE IS PLUS OR BLANK, AND NEGATIVE IS MINUS SIGN. THE TRANSMISSION SHOULD BEGIN WITH ONE HEADER BLOCK BEFORE THE DATA BLOCKS. THE HEADER BLOCK SHOULD CONTAIN THE CLASSIFICATION, MISSION NUMBER, DATE OF MISSION, CAMERA NUMBER(S), CAMERA FOCAL LENGTH(S), AND A SET OF COLUMN HEADERS. EACH QUANTITY IN THE DATA BLOCK MUST HAVE A CONSTANT FIELD WIDTH; I.E., DECIMAL POINTS LINED UP AND LEADING ZEROS WHERE APPLICABLE.

B. THE FRAME COUNT RECORDED ON THE TAPE SHOULD BE THE SAME FRAME COUNT RECORDED ON THE FILM DATA BLOCK. FRAME COUNT SHOULD NOT BE RECORDED ON THE TAPE WHEN THE CAMERA

DISTRIBUTION

CY	OFFICE	PI
1	FILE	
	CABLE SEC.	
	PPBS/RD	
	SECUR.	
3	TSSG/APSD	
4	TSS	✓
5	PSG/OC	
	HRD	
	REPRO	
	AID	
	IEG	
	PROD	
	SCIEN	
	WEST	
	EAST	
	M&S	
	PGM	
	PAS	
	DIA-XX4	
	SPAD	
	[redacted]	

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ADVANCE CY SANITIZED WITH TEXT

IS NOT IN OPERATION.

C. YAW IS DEFINED AS THE INSTANTANEOUS ANGULAR DIFFERENCE BETWEEN THE GROUND TRACK VELOCITY VECTOR AND THE TRUE HEADING OF THE VEHICLE.

D. ATTITUDE AND POSITION DATA IS REQUIRED ONCE FOR EACH CAMERA(S) OPERATION AND AT A FIXED INTERVAL OF 10 SECONDS WHEN THE CAMERA(S) IS NOT IN OPERATION.

3. THIS OFFICE IS CONCERNED THAT NO REPLY HAS BEEN RECEIVED IN RESPONSE TO REF A STATING DATA REQUIREMENTS AND REQUESTING MEETING ON COMPASS ARROW PROJECT.

GP-1

S E C R E T

END OF MESSAGE